

# CERTIFIED MATERIAL REPORT

CMR No. : 1411053500015

Date of Issue : 2014-11-05

Customer	M.BINDT TRADING		
Trade Name	S-310.16	Size	2.0mm*300mm
Lot No.	11511	Purchaser's Order No.	-
Applicable Specification	AWS A5.4 E310-16 Equivalent to EN 1600 E 25 20 R		

Welding Current	AC	Shielding Gas	-	Post Weld Heat Treatment (°C × hr.)	AS WELDED			
Mechanical Properties	Tensile Test			Impact Test (CVN - Joule)				
	YS(MPa)	TS(MPa)	EL(%)	Temp.(°C)	X1	X2	X3	Avg.
	-	629	31.4		-	-	-	-
Spec.	-	≥550	≥30	-				

Chemical Composition (%)

(Weld Metal) Spec.	C	Si	Mn	P	S	Cu	Ni	Cr	Mo			
		0.10	0.58	1.88	0.022	0.009	0.05	20.03	27.78	0.09		
		0.08 ~0.20	≤0.75	1.0 ~2.5	≤0.03	≤0.03	≤0.75	20.0 ~22.5	25.0 ~28.0	≤0.75		

Others

\* According to EN 10204-2004 : 3.1(Chemical), 2.2(Mechanical)

We hereby certifies that the material covered by this report has been inspected in accordance with and been found to meet the applicable requirements of specification and customer's requirements.

Approved by

*Sang Hyeon Lee*

QA Manager Lee, S. H.



**HYUNDAI WELDING CO., LTD.**

Head Office #507, Teheran-ro, Gangnam-gu, Seoul, Republic of Korea  
Pohang Plant #100, Daesong-ro, Nam-gu, Pohang, Republic of Korea